APPENDIX P

DREDGED MATERIAL MANAGEMENT PLAN (DMMP)

Jacksonville Harbor Navigation Study, Duval County, Florida

DRAFT
INTEGRATED GENERAL REEVALUATION REPORT II AND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

1.0 Project Description and Scope

DMMPs are "living" documents that are updated when significant changes to existing conditions require a new evaluation of disposal options. The purpose of this DMMP update is to ensure that maintenance dredging activities associated with the Jacksonville Harbor navigation project are performed in a least cost, environmentally acceptable manner, use sound engineering techniques, are economically warranted, and that sufficient confined upland and ocean disposal facilities are available for at least the next 20 years. This plan has been completed in accordance with Engineering Regulation (ER) 1105-2-100, Section E-15.The previous Dredged Material Management Plan (DMMP) Update for Jacksonville Harbor was prepared by US Army Corps of Engineers (USACE), Jacksonville District (SAJ) in November 2012. It accounted for Operation and Maintenance (O&M) material only. This appendix is an update to address all new work material from the Jacksonville Harbor GRR study and any increase in maintenance volumes do to the selected plan.

The 20-year planning horizon for the DMMP is from 2015-2034. The CY13 discount rate is 3.75%. A least cost analysis is herein performed to determine the most economically viable plan by comparing alternative disposal scenarios

2.0 Description of existing conditions

For general existing conditions in Jacksonville Harbor, see Section 2.0 of the main report.

2.1 Shoaling Rate/Dredging History

The 2012-2031 Jacksonville Harbor DMMP Update applied a 20% overdepth/bulking factor to the yearly dredging rate. This was to more conservatively estimate the remaining capacity in the Dredged Material Management Areas (DMMA). This GRRII DMMP also uses a 20% overdepth/bulking factor to evaluate DMMA capacity for the next 20 years. The actual dredging rate (without the 20% factor) was used in the cost estimation.

Table 1: Existing Conditions: Jacksonville Harbor Dredging Schedule

FY	Jacksonville Harbor Maintenance Dredging Schedule						
	Channel Cuts						
	Cuts 3-13	Cuts 14-42	Cuts F&G	Cut 43-TC	JaxPort 2A	JaxPort 2B/3	Annual Total
2012			106,000	219,000		457,600	782,600
2013	555,000	870,000			124,800	457,600	2,007,400
2014			210,000			457,600	667,600
2015		870,000		450,000	124,800	457,600	1,902,400
2016	555,000		210,000			457,600	1,222,600
2017		870,000			124,800	457,600	1,452,400
2018			210,000	450,000		457,600	1,117,600
2019	555,000	870,000			124,800	457,600	2,007,400
2020			210,000			457,600	667,600
2021		870,000		450,000	124,800	457,600	1,902,400
2022	555,000		210,000			457,600	1,222,600
2023		870,000			124,800	457,600	1,452,400
2024			210,000	450,000		457,600	1,117,600
2025	555,000	870,000			124,800	457,600	2,007,400
2026			210,000			457,600	667,600
2027		870,000		450,000	124,800	457,600	1,902,400
2028	555,000		210,000			457,600	1,222,600
2029		870,000			124,800	457,600	1,452,400
2030			210,000	450,000		457,600	1,117,600
2031	555,000	870,000			124,800	457,600	2,007,400
TOTALS (CY)	3,885,000	8,700,000	1,996,000	2,919,000	1,248,000	9,152,000	**27,900,000**

Table 1 (above) shows the dredging requirements from the approved 2012-2031 DMMP Update. This 20 year analysis is for the current O&M dredging (existing conditions). These volumes have a 20% overdepth/bulking factor added on in order to more conservatively estimate DMMA capacity.

When the 20% factor is removed to calculate dredging quantities:

Section 1 (Bar Cut-3 through Cut-13) = 185,000 CY/YR * 0.80 = 148,000 CY/YR
Section 2A (Cut-14/15 through Cut-42) = 435,000 CY/YR * 0.80 = 348,000 CY/YR
Section 2B (Cuts F & G) = 105,000 CY/YR * 0.80 = 84,000 CY/YR
Section 3 (Cut-43 through Terminal Channel) = 150,000 CY/YR * 0.80 = 120,000 CY/YR
Grand Total (Section 1 through 4) = 700,000 CY/YR of annual shoaling in Jacksonville Harbor

Section 3 was adjusted to coincide with the GRRII project limits as follows:
Section 3A (Cut-43 through Cut-45 Station 28+18.43) = 12,000 CY/YR
Section 3B (Cut-45 Station 28+18.43 through Terminal Channel) = 108,000 CY/YR

GRRII project Grand Total (Section 1 + Section 2A + Section 3A) = 508,000 CY/YR

Proposed GRRII project future O&M requirements as calculated based on project footprints:

Section 1 percentage increase in footprint = 7.71%
Section 2A percentage increase in footprint = 33.08%
Section 3 percentage increase in footprint = 39.21%

Section 1 O&M shoaling volume increase = 148,000 * .0771 = 11,411 = 12,000 CY/YR
Section 2A O&M shoaling volume increase = 348,000 * .3308 = 115,118 = 115,000 CY/YR
Section 3 O&M shoaling volume increase = 12,000 * .3921 = 4,705 = 5000 CY/YR

Total O&M shoaling volume increase = 132,000 CY/YR

This represents a predicted increase in O&M shoaling for the GRRII project of 26.0% over the existing average annual maintenance requirement and a total increase of 18.9% for the entire Jacksonville Harbor Navigation project O&M.

Total Future Annual Average O&M Dredging Requirement for GRRII project limits = 640,000 CY/YR

Grand Total Future Annual Average O&M Dredging Requirement for Entire Jacksonville Harbor = 832,000 CY/YR

When the 20% overdepth and bulking factor is applied to the Future With-Project dredging rates, the volumes used to estimate capacity are:

Section 1 Volume = 12,000 CY/YR * 1.20 = 14,400 CY/YR
Section 2A Volume = 115,000 CY/YR * 1.20 = 138,000 CY/YR
Section 3A Volume = 5000 CY/YR * 1.20 = 6000 CY/YR

Total annual dredging rate to be used for capacity estimation: 158,400 CY/YR
Table 2 (below) shows this rate applied to the entire harbor as follows:

Section 1	14,400 cy	every 3 years = 43,000 cy per event (rounded)
Section 2A	138,000 cy	every 2 years = 276,000 cy per event
Section 3A	18,000 cy	every 3 years = 18,000 cy per event

These new rates are applied starting in year 2018 which is estimated to be the mid-point of the GRR construction period.

Table2: Future With Project Conditions: Jacksonville Dredging Schedule based upon a 47-foot project

FY*	Jacksonville Harbor Maintenance Dredging Schedule 47-Foot Project						
	Channel Cuts						
	Cuts 3-13	Cuts 14-42	Cuts F&G	Cut 43-TC	JaxPort 2A	JaxPort 2B/3	Annual Total
2015		870,000		450,000	124,800	457,600	1,902,400
2016	555,000		210,000			457,600	1,222,600
2017		870,000			124,800	457,600	1,452,400
2018			210,000	468,000		457,600	1,135,600
2019	598,000	1,146,000			124,800	457,600	2,326,400
2020			210,000			457,600	667,600
2021		1,146,000		468,000	124,800	457,600	2,196,400
2022	598,000		210,000			457,600	1,265,600
2023		1,146,000			124,800	457,600	1,728,400
2024			210,000	468,000		457,600	1,135,600
2025	598,000	1,146,000			124,800	457,600	2,326,400
2026			210,000			457,600	667,600
2027		1,146,000		468,000	124,800	457,600	2,196,400
2028	598,000		210,000			457,600	1,265,600
2029		1,146,000			124,800	457,600	1,728,400
2030			210,000	468,000		457,600	1,135,600
2031	598,000	1,146,000			124,800	457,600	2,326,400
2032			210,000			457,600	667,600
2033		1,146,000		468,000	124,800	457,600	2,196,400
2034	598,000		210,000			457,600	1,265,600
TOTALS (CY)	4,143,000	#########	2,100,000	3,258,000	1,248,000	9,152,000	**30,809,000**

Since it is anticipated that the majority of increase to future O&M dredging will result from the increase to the project dimensions, it is expected that there will be a negligible difference between the 47' LPP and 45' NED Plans regarding impacts to the shoaling rate (additional sediment transport modeling is underway to confirm). Advance Maintenance areas are being strategically located within the project to prevent an increase in maintenance dredging frequency requirements and these areas would be identical for either project depth.

2.2 Material Quality

Throughout the DMMP, there are four designations of dredged material quality.

1. Beach quality material is less than 10% fine sediments.
2. Nearshore quality material is greater than 10% fine sediments, but less than 20% fine sediments.
3. ODMDS quality material is too fine for beach or nearshore placement and must pass testing for physical, chemical, and toxicological parameters according to Section 103 of the Marine Protection, Research, and Sanctuaries Act.
4. CDF-only quality material is not suitable to be placed on the beach, nearshore, or ODMDS. However, it is not considered hazardous or toxic.

The increased maintenance material from the future project is expected to have the same material properties as the maintenance material that is currently dredged from the various channel reaches as designated in the 2012-2031 O&M DMMP. The new work material will be a mixture of various material types including rock and is expected to be suitable for disposal in the ODMDS.

3.0 Projections of future conditions in the absence of a Management Plan

This management plan assumes that the Mile Point project is constructed and that the GRRII is approved and starting construction in 2015. The GRRII project will produce approximately 18 MCY of new work material; this includes overdepths, advance maintenance, and local service facilities.

Without an updated Base Plan that provides for 20 years of disposal capacity, several things were assumed likely to occur:

- There is no confined or upland capacity for new material. Without the DMMP, ODMDS Site Monitoring and Management Plan (SMMP), and associated testing and permits, any deepening and widening cannot occur since there is nowhere to place the material.
- Without the permits associated with this DMMP and Nearshore EA, beach and nearshore placement will not be allowed.
- There would be significant negative economic effects to the Nation if Jacksonville Harbor channels could no longer be maintained for navigation (due to the increase in maintenance from new work).

4.0 Concise statement of specific problems and opportunities

4.1 Problem Statement: The Jacksonville Harbor GRR deepening and widening will produce approximately 18MCY of material. Because all existing Confined Disposal Facilities (CDFs) are needed to provide capacity for O&M dredged material for the next 20 years, the Jacksonville District (SAJ) needs to provide placement capacity for all new work material and any subsequent increase in O&M dredged material.

4.2 Opportunity Statement: There is an opportunity to use the expanded Ocean Dredged Material Disposal Site (ODMDS) or newly permitted nearshore placement area, and to create valuable habitat in Mill Cove with dredged material.

5.0 Alternative plans

5.1 Alternative disposal measures to address identified problems and opportunities

Measure 1: No Action. Maintenance dredging operations will continue as described in the approved 2012-2031 Jacksonville Harbor DMMP Update; construction of the Jacksonville Harbor GRRII project is expected to begin in 2015.

Measure 2: Island Complex in Mill Cove. This alternative was evaluated for construction material.

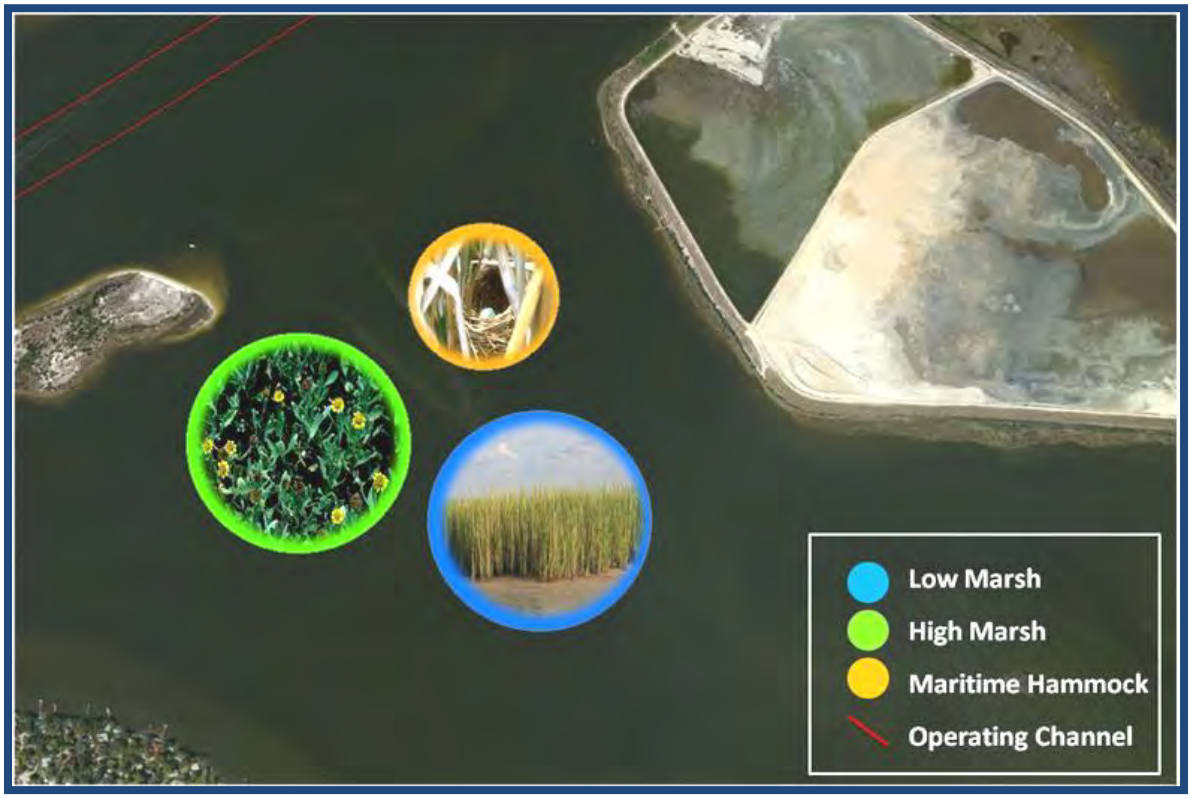

Figure 1: Proposed island configuration in Mill Cove

The ideal plan for the Island Complex is to create a variety of habitats for a diverse range of flora and fauna. This would be accomplished by placing dredged material at different elevations to create 3 islands: (1) low marsh at approximately -1 ft North American Vertical Datum 1988 (NAVD88), (2) high marsh at approximately +1/2 ft NAVD88, and (3) maritime hammock at approximately +5 ft NAVD88.

Measure 3: Nearshore Dredge Material Placement. Maintenance dredging material could be placed in the nearshore (shallow depths in the littoral zone) by barge or by pipeline. There is no volume limit per event. A permit for nearshore placement has not yet been issued.

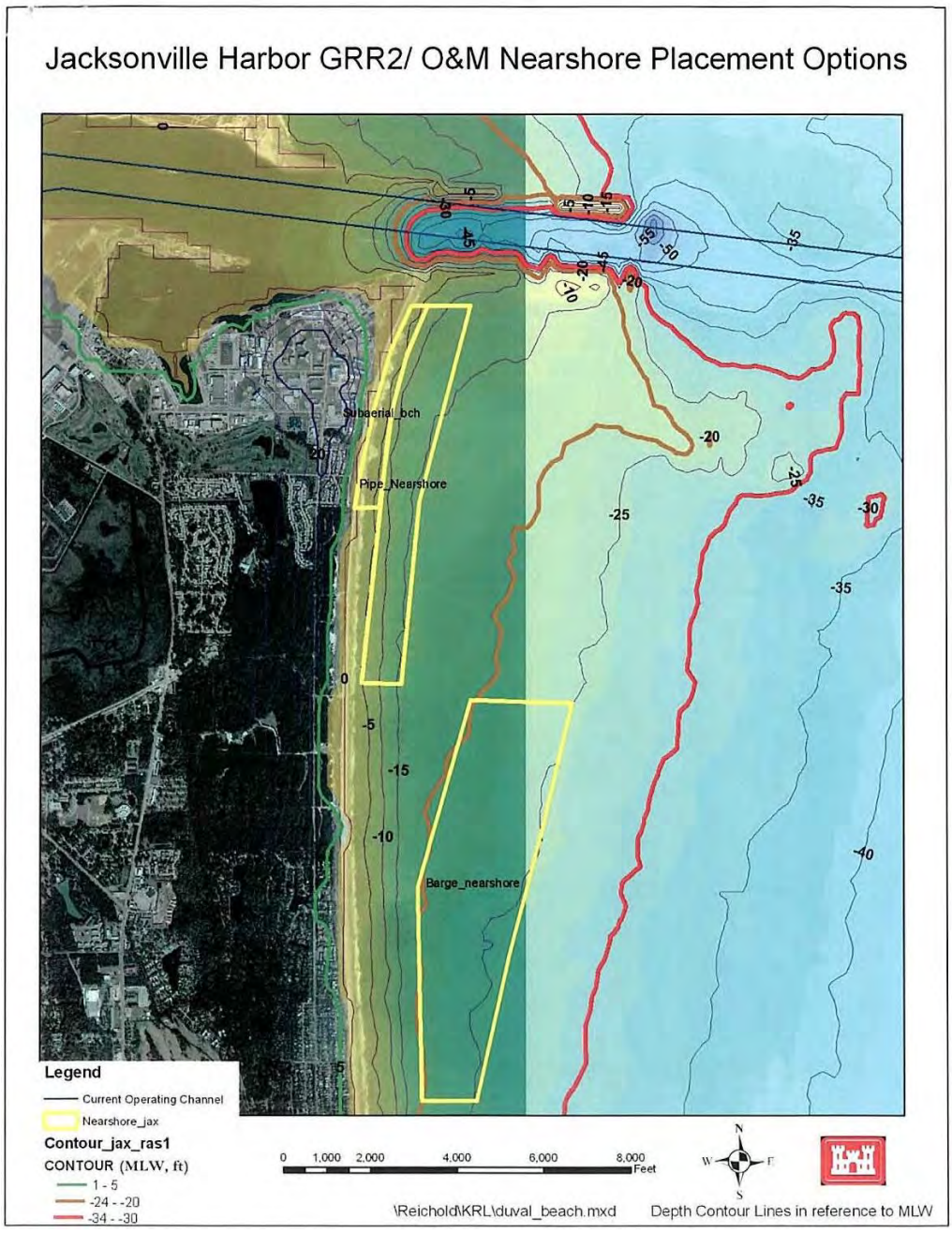

Figure2: Nearshore placement options

Table 3: Nearshore Placement Options

Disposal Location	Area (ft^2)	Approximate Area (acres)	Disposal amount for 1 ft lift (CY)	Disposal amount for 5 ft lift (CY)
Pipeline Nearshore	8,697,337	200	319,461	1,597,307
Barge Dump Nearshore	19,672,965	450	722,607	3,613,033

Measure 4: Beach Quality Dredged Material Placement on the Beach.

Maintenance dredging beach quality material can be placed in the northern section of the Duval County Shore Protection Project. There is no volume limit per event.

Measure 5: Ocean Dredge Material Disposal Site.

Numerical model simulations (USACE, 2008) indicated the Jacksonville ODMDS had a remaining volume of approximately 7.5 million cubic yards (MCY) as of June 2010. The Department of the Navy has since completed deepening the turning basin and entrance channel at Navy Station Mayport for proposed home porting a nuclear carrier and additional surface ships. This project placed approximately 4.1 MCY of dredged material at the Jacksonville ODMDS. Naval Station Mayport and the Jacksonville Harbor Federal Navigation Project will also continue to utilize the ODMDS for non-beach compatible maintenance material.

Material from the proposed Jacksonville Harbor Deepening project and future maintenance will require additional capacity. USACE is coordinating with the EPA to expand the existing ODMDS to have a total capacity of approximately 65.0 MCY. The new Jacksonville ODMDS will be approximately 4 nmi square with the center of the site approximately 7 nmi southeast of the mouth of the St. Johns River. Disposal operations will be managed through the Jacksonville ODMDS Site Management and Monitoring Plan.

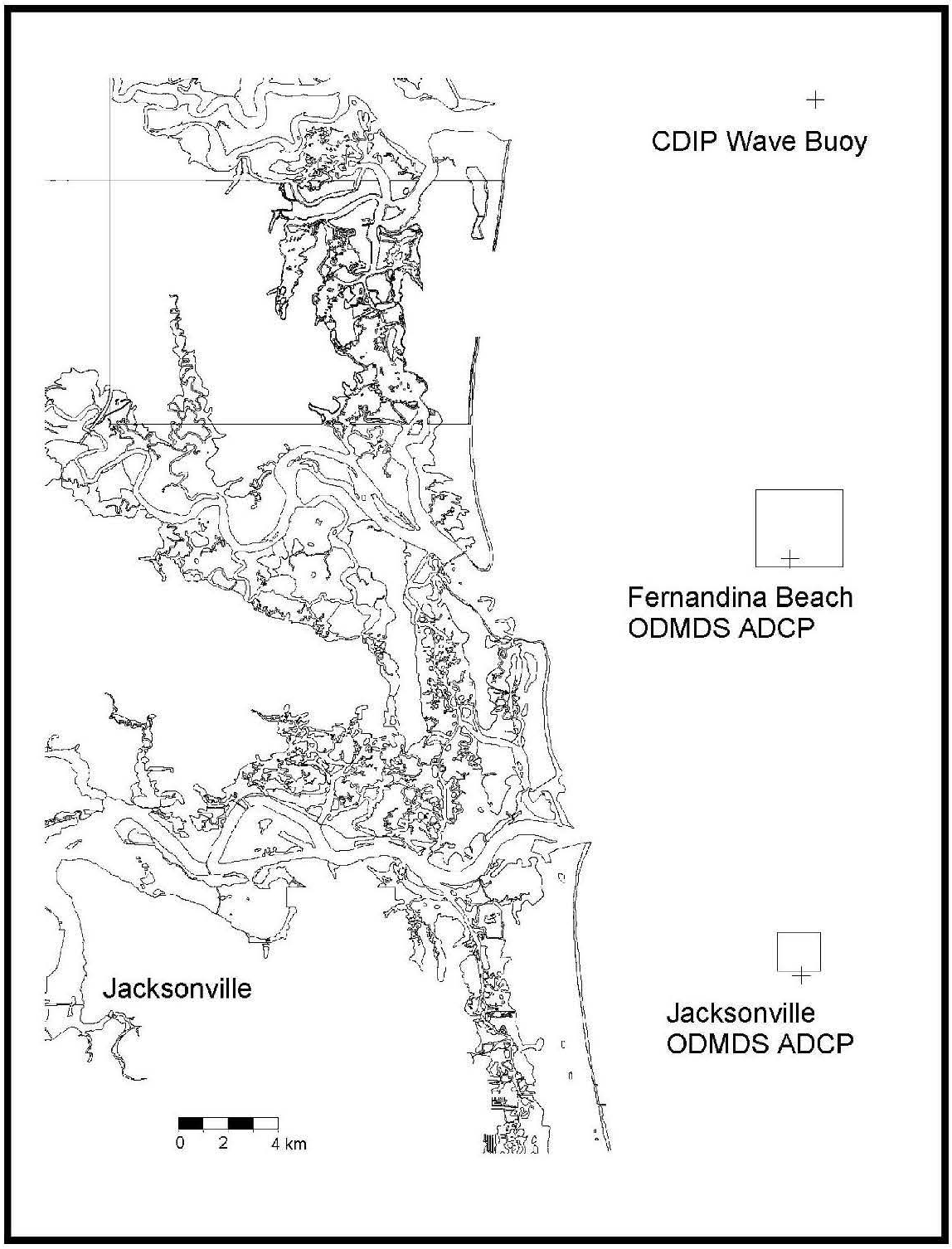

Figure 3: ODMDS location

Measure 6: Independence Recycling facility. This facility is a new business in the Talleyrand area that can take CDF-only material and recycle it at a rate of 300,000 CY/YR. This capacity is not high enough to be cost-effective for the large volume of new work material.

Measure 7: Creation of New Berth/Wharf Space along Riverfront in Section 2B. Dredged materials could be placed behind a new bulkhead wall line to create new wharf frontage along St Johns River for the Port of Jacksonville. Placement could enhance the beneficial use of several hundred thousand CYs of dredged materials.

Measure 8: Mill Cove Bridge. Build a bridge from Bartram Island to undeveloped land along Wonderwood Expressway and adjacent to Mill Cove. The bridge would connect back to 9A and would allow off-loading of dredged material without trucking through residential areas. 50,000 CY/YR could be offloaded at no cost.

Measure 9: Rock at areas of shoreline erosion. Placing rock material as close as possible to areas of shoreline erosion using a split-hull bottom dump barge and tug would reduce dredging costs and provide additional capacity for the ODMDS site instead of taking the rock material offshore and filling up the rock placement section of the ODMDS.

5.2 Beneficial uses alternatives

The Federal Government has placed considerable emphasis on the desirability of using dredged material in a beneficial manner. Statutes such as the Water Resources Development Acts of 1992, 1996, 2000, and 2007 demonstrate that beneficial use has been a Congressional priority. USACE has emphasized the use of dredged material for beneficial use through such regulations as 33 CFR Part 335, ER 1105-2-100, and ER 1130-2-520 and by Policy Guidance Letter No. 56. Many types of Regional Sediment Management (RSM) were studied in this DMMP including beach restoration for habitat and storm damage reduction (3, 4), commercial construction (6, 7), and habitat creation and recreation (2). Beneficial use alternatives under consideration include placement of material that may have the effect of shoreline stabilization.

5.3 Reasons for selecting and combining measures to formulate alternative plans

5.3.1

The additional O&M material resulting from the GRRII will be placed according to the 2012-2031 DMMP Base Plan: Section 1 (14,000 CY/YR) will be placed in the nearshore, Section 2A (138,000) will be placed in Buck Island Cell A, and Section 3A (6000 CY/YR) will be placed in Bartram Island. Both the nearshore and Buck Island are considered to have “unlimited” capacity and Bartram Island has the 20 year capacity for the additional amount. All non-Federal material will go to the sponsor owned upland site that was part of the 2012-2031 DMMP Base Plan.

The final array for new work:

No Action.

ODMDS. All 18 MCY will go to the expanded ODMDS.

ODMDS, Island Complex. Approximately 2.2 MCY would go to create an island complex in Mill Cove, while the rest of the new work material (15.8 MCY) would go to the ODMDS.

5.3.2 Options to be pursued in the Planning Engineering and Design (PED) phase

As the GRRII study progress and the level of detail increases, several options will be investigated for material using the data collected in the PED phase. The plans listed in 5.3.1 accomplish the Planning Objectives, but there is an opportunity to achieve greater efficiencies by developing the options of beach placement, nearshore placement, and rock placement at erosional shorelines along the river later in the study. There may be material from the construction of the project suitable for beach or nearshore placement however depending upon the type of equipment that is chosen it may or may not be feasible to separate the sand from other materials in order to utilize it (i.e. cutter-suction will mix materials coming from various elevations as it digs and pick up non-beach quality material). These options do not accomplish the Planning Objectives on their own, are not currently implementable, and are not considered least cost based on the recent evaluation in the 2012-2031 DMMP Update for O&M material.

5.3.3 Options to be pursued by the non-Federal sponsor

A bridge from Bartram Island to Fort Caroline requires significant real estate, coordination with FDOT, and upfront sponsor funding. The GRRII project is accelerated and this option is unable to provide capacity for the new material in the current time frame. Additionally, the option to expand the Crowley terminal is not implementable right now since Crowley is still operating at that location. The non-Federal sponsor is encouraged to pursue both these options for future development on their own.

6.0 Evaluation of Alternative Plans

6.1 Cost Evaluation

The No Action Alternative would not allow for the continued operation and maintenance of Jacksonville Harbor, and would eventually result in a closure of the navigation channel. The resulting costs to the region and the nation to supply alternate energy resources to replace those resources provided by this navigation channel are considered to be significantly greater than the costs of the action alternatives. Table 4 shows the unit costs for the alternative plans. The total cost for an alternative plan includes dredging, offloading, placement, construction of disposal areas, real estate, and mitigation costs.

Table 4: Cost per Section of additional maintenance

Section	Volume (CY/YR)	Placement Area	Unit Cost ($)
Section 1	*5,000*	*Nearshore*	*$6.63*
Section 2A	*115,000*	*ODMDS*	*$8.12*
Section 3A	*12,000*	*ODMDS*	*$9.12*

There is not enough capacity to use Bartram or Buck for the duration of the project thus the ODMDS was assumed.

6.2 Environmental Evaluation

6.2.1 Mill Cove Modeling. The model results (ADH) are as follows: the creation of the islands within Mill Cove will have no significant effect on water levels and volumes of water flowing into and out of Mill Cove. However, as noted above, very slight reductions in water velocities can be expected to occur in the immediate vicinity of the islands, accompanied by very slight increases in velocity at other locations. While the velocity differences are minimal, it should be noted that Mill Cove is a very shallow water body which currently experiences shoaling.

6.2.2 Nearshore Placement.

An EA (FONSI signed on 6 June 2012) presents an evaluation on the potential environmental effects associated with the nearshore placement of nearshore quality dredged material from the maintenance of the Jacksonville Harbor Federal navigation project. USACE proposes to place nearshore quality dredged material in all or portions of the two potential nearshore placement areas offshore Duval County, Florida. All other actions are covered by prior NEPA documentation. Pursuant to the National Environmental Policy Act of 1969 (NEPA), the USACE described the affected environment, evaluated potential environmental effects resulting from the proposed action, and developed and described alternatives to the proposed action in its *Final Environmental Impact Statement* (EIS) *Navigation Channel Improvements, Jacksonville Harbor, Duval County, FL* (USACE 1998*)*. Subsequent to the EIS, the USACE prepared an *Environmental Assessment: Jacksonville Harbor General Reevaluation Report and Finding of No Significant Impact* (2002). No environmental, economic, or social circumstances have changed to require an update of NEPA for nearshore placement.

7.0 Trade-off analysis

A trade-off analysis was conducted to assess the final alternatives against the planning objectives:

1) Provide dredged material placement capacity for new work from the Jacksonville Harbor GRR and any increased operations and maintenance material due to the project.
2) Maximize RSM opportunities for dredged material

7.1 No Action Alternative

Advantages: None.

Disadvantages: Does not allow for maintenance to authorized dimensions. The backlog of maintenance dredging would continue to accrue and would limit the full use of the channel, resulting in increased transportation costs to the region. The plan does not allow for the placement of dredged material in the most cost-effective location consistent with environmental and engineering requirements. The plan does not optimize the beneficial use of dredged material.

7.2 ODMDS and Island Complex

Advantages: The island complex provides incidental environmental benefits through habitat creation and recreation.

Disadvantages: This alternative costs slightly more than just using the ODMDS, but since a project like the island complex has not been completed in Florida recently, the timeframe for coordination is likely lengthy.

7.5 ODMDS Placement

Advantages: ODMDS placement is the lowest risk alternative. It is also the lowest cost alternative.

Disadvantages: It does not provide environmental benefits.

8.0 Selection of final plan

8.1 Rationale

One of the biggest screening factors of alternatives for the GRRII DMMP is the time it would take to implement the selected plan. Construction is expected to begin in 2015, and the increased shoaling rate is assumed to start in 2018 (half way through the construction). Because of this, several alternatives like the Bartram Bridge or Crowley berth expansion were screened right away. Rock placement on erosional river shoreline and island creation was looked at in more detail, but environmental agency coordination and permitting was not expected to be complete in time for construction. Independence Recycling Facility simply does not have the capacity to handle the amount of dredged material that needs to be placed.

Material quality was also a screening criterion, much like it was in the 2012-2031 DMMP. The new work material contains a large amount of rock, sand, and silt along with isolated pockets of clay which is not suitable for either beach or nearshore placement. Due to the quantity of material and the nature of dredging that will result in a mixing of material types during construction, the only plan that is considered implementable, environmentally acceptable, and cost effective is for all new work material to go to the ODMDS.

8.2 Sensitivity Analysis

If offloading Buck Island is no longer feasible, or the nearshore placement area is not available, the additional maintenance material from Sections 1 and 2A would go to the ODMDS. There is enough capacity in the ODMDS to handle the additional 152,400 CY/YR. There is enough capacity in Bartram Island to handle the small additional maintenance amount of 6000 CY/YR; however, there is also enough capacity in the sponsor's proposed upland placement cell in case Bartram fills more rapidly than anticipated.

8.3 Risks and Uncertainties

This DMMP is a planning-level document and is subject to the uncertainties inherent in planning and harbor operations processes. Potential items that would affect the implementation of the DMMP include dredged material quality, environmental testing uncertainties, natural disasters or emergencies, and schedule and funding changes.

Catastrophic uncertainties that could affect the DMMP include hurricanes, chemical contamination from spills, and vessel accidents. Such unforeseen events or conditions may result in the shifting of priorities for the placement of dredged material for beneficial use or confined disposal areas, but it is not expected that these actions would affect the Base Plan. Therefore, this risk is low.

Island Complex: Constructing the island complex is challenging from both environmental coordination and engineering aspects. The Jacksonville Harbor GRR is on an accelerated schedule and the agency coordination necessary to get the project permitted could take a significant amount of time. To avoid delays, coordination with environmental agencies began early in the process, and agency preferences were taken into account in the design. There is a chance that an island will settle more than anticipated, or erode away despite geological testing and modeling efforts. If this occurs, suitable material from the next maintenance event would be used to rebuild the island.

Nearshore Placement:

1) While there is substantial geotechnical information within the project area and additional information will be collected during the PED phase, delineating dredge areas containing material specifically meeting the "sand rule" criteria (F.A.C. 62B-41.007(j)(k)) for nearshore placement is difficult. Construction dredged material between 10% and 20% fine content does not typically occur in the Jax Harbor navigation channel. It is not practicable to perform targeted dredging to obtain material meeting nearshore criteria.
2) History--the previous placement of channel construction material on the beach occurred in 2002. The placement of large amounts of clay balls, rocks and oyster shells on the beach was subject of regulatory enforcements actions and was highly publicized at the time. Thus, the regulatory agencies and the public will be highly sensitive to the beach and nearshore placement of construction material.

8.4 The remaining 30 years of the GRRII Federal project life

Once the planning horizon for this DMMP has passed (year 2034), the existing CDFs are expected to be full. It is assumed that the excess O&M material starting in 2035 would be placed in the ODMDS if no capital improvements have been made by that time. Material of beach or nearshore quality could be placed in those permitted areas, or the nearshore.

9.0 Description of selected Management Plan

9.1 Plan components

The 2015-2034 Base Plan for new work material is all 18 MCY will be placed in the ODMDS.

The 158,000 CY/YR increase in maintenance material will be placed according to the existing O&M Base Plan:

Material from Section 1 will go to the nearshore placement area,
Material from Section 2A will go to Buck Island Cell A,
Material from Section 3A will go to Bartram Island, and
Non-Federal material will go to the proposed upland CDF.

9.2 Implementation requirements and schedules

This section will be completed during the feasibility level of design.

9.3 Consistency with the Base Plan

The 2012-2031 Base Plan for O&M material is:

- For dredging that takes place in Channel Section 1 (cuts 3-13), 555,000 cubic yards will be placed in the nearshore every 3 years.
- For dredging that takes place in Channel Section 2A (cuts 14-42)
  - 870,000 cubic yards will be placed in Buck Island Cell A every 2 years
  - 435,000 cubic yards/year will be offloaded from Buck Island Cell A at no cost for construction purposes.
  - 124,800 cubic yards will be placed in Buck Island Cell B every 2 years.
- For dredging that takes place in Sections 2B/3
  - A FY 12/13 contract to raise dikes at Bartram Island Confined Disposal Facility (CDF) Cells A and B-2 to 55' will provide enough Federal capacity for the next 20 years. The only Federal action is required for Sections 2B/3 is dredging approximately 450,000 cubic yards every 3 years. No CG funds are required to maintain this part of the Federal channel.
  - Approximately 457,600 cubic yards/year need to be dredged from non-Federal areas. USACE recommends the non-Federal sponsor purchase 167 acres of upland to construct a new DMMA. This is paid for with 100% non-Federal funds since this area will be solely used for dredged material to maintain non-Federal berths and Confined Disposal Facilities.

The 2015-2034 Base Plan is consistent with the 2012-2031 DMMP's Planning Objectives and Base Plan for O&M material.

10.0 NEPA documentation, Water Quality Certification

An Environmental Impact Statement (EIS) is being prepared with the GRRII to cover ODMDS placement. Previous NEPA documentation covers the dredging and other dredged material placement alternatives.

Since all dredging activities will occur within waters of the State, a WQC (DEP Joint Coastal Permit or Environmental Resource Permit) will be obtained from DEP. Should Beach or Nearshore placement be pursued, a WQC and CZMA consistency determination (DEP Joint Coastal Permit) will be required from the State. A concurrence from EPA under MPRSA Section 103 will be required for transportation to and placement into Jacksonville ODMDS.

11.0 Results of coordination with local, state and Federal agencies

12.0 MANAGEMENT PLAN IMPLEMENTATION

12.1 Federal and Local Components

12.1.1 Federal Responsibilities

The USACE is responsible for budgeting the federal share of construction costs for all future work during the remaining economic life of the project. Federal funding is subject to budgetary constraints inherent in the formation of the national civil works budget for a given fiscal year. The USACE will perform the necessary planning, engineering, and design needed for the federal project prior to construction. The USACE will obtain water quality certifications.

12.1.2 Non-Federal Responsibilities

If the cost-sharing outlined in the current PPA were to change, the following responsibilities apply:

Prior to implementation, the non-Federal sponsor shall be required to enter into an amended PPA, as required by Section 221 (PL 91-611), as amended, to provide local cooperation satisfactory to the Secretary of the Army. Such local cooperation shall provide the following non-Federal responsibilities:

a. Provide, during the period of construction, a cash contribution equal to 25 percent of the total project costs for construction of the general navigation features (which include the construction of land-based and aquatic dredged material disposal facilities that are necessary for the disposal of dredged material required for project construction, operation, or maintenance and for which a contract for the federal facility's construction or improvement was not awarded on or before October 12, 1996);

b. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the project, up to an additional 10 percent of the total cost of construction of the general navigation features. The value of lands, easements, rights-of-way, and relocations provided by the non-Federal sponsor for the general navigation features, described below, may be credited toward this required payment. If the amount of credit exceeds 10 percent of the total cost of construction of the general navigation features, the non-Federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of lands, easements, rights-of-way, and relocations in excess of 10 percent of the total cost of construction of the general navigation features;

c. Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features (including all lands, easements, and rights-of-way, and relocations necessary for dredged material disposal facilities);

d. Provide, operate, maintain, repair, replace, and rehabilitate, at its own expense, the local service facilities in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

e. Accomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government;

f. Grant the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the general navigation features for the purpose of inspection, and, if necessary, for the purpose of operating, maintaining, repairing, replacing, and rehabilitating the general navigation features;

g. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project, any betterments, and the local service facilities, except for damages due to the fault or negligence of the United States or its contractors;

h. Keep, and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as will properly reflect total cost of construction of the general navigation features, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local governments at 32 CFR, Section 33.20;

j. Perform, or cause to be performed, any investigations for hazardous substances as are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, or rehabilitation of the general navigation features. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigation unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

k. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features;

l. To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA;

m. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

n. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army;" and the application of and compliance with the Davis-Bacon Act, Contract Work Hours and Safety Standards Act and the Copeland Anti-Kickback Act;

o. Provide a cash contribution equal to the non-Federal cost share of the project's total historic preservation mitigation and data recovery costs attributable to commercial navigation that are in excess of 1 percent of the total amount authorized to be appropriated for commercial navigation; and

p. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

The non-Federal sponsor furnishes the above assurances after the project has been authorized for construction by execution of a PPA with the U.S. Government. As of July 8, 1994 there is no longer a requirement to include an initial draft PPA when submitting decision documents. The model PPA and possible deviations based on the selected plan have been fully discussed with the non-Federal sponsor. The non-Federal sponsor understands the type of agreement that they will be expected to sign prior to the start of construction and that they must provide non-Federal items of cooperation. The terms of non-Federal cooperation are listed above as 'items of cooperation'.

12.2 Cost Sharing

Although non-Federal placement capacity need has been identified and considered in this DMMP, the actual timeframes and dredging needs for permitted non-Federal dredging may not be consistent with federal interests. The request for non-Federal dredging placement may occur during an active federal

dredging cycle or during construction activities and operation and maintenance of a placement site. The placement of permitted non-Federal dredging will require the approval of and direct coordination with Jacksonville District and the JAXPORT and shall be consistent with all federal and state laws and regulations. The costs for the placement of permitted non-Federal dredging shall be consistent with the provisions of the WRDA of 1986 and subsequent WRDAs, PGL 47, the PPA and subsequent Laws, Regulations, and Policy at the time requested.

The non-Federal share of costs is applied as follows:

- Costs for operation and maintenance of the channel and general navigation features are 100 percent federal responsibility.
- The federal government will pay 75 percent of the costs during each period of construction for general navigation features associated with federal capacity needs of the project, consisting primarily of major non-routine dike construction and/or raising, new facility construction, facility expansion and associated shore protection, and mitigation costs. non-Federal interests would pay all costs associated with the non-Federal capacity.
- The non-Federal sponsor will pay 25 percent of the costs for construction of general navigation features of the project, which would consist primarily of major non-routine dike construction and/or raising, new facility construction, facility expansion and associated shore protection and mitigation costs. This cost share is to be paid concurrent with federal expenditures during each period of construction throughout the term of the DMMP as prescribed by the terms of the PPA (for which this DMMP serves as the decision document).
- The non-Federal sponsor will repay with interest, beginning with a period not to exceed 30 years following completion of each period of construction of the project, an additional 0 to 10 percent of the total cost of construction of general navigation features depending upon the amount of credit given for the value of lands, easements, rights-of-way and relocations (LERRs) provided by the non-Federal sponsor for the general navigation features. If the amount of credit exceeds 10 percent of the total cost of construction of the general navigation features, the non-Federal sponsor would not be required to make any contribution, nor would it be entitled to any refund for the value of lands, easements, rights-of-way and relocations in excess of 10 percent of the total cost of construction of the general navigation features.

13.0 Recommendations

131. General

The following management measures are recommended, in addition to executing the Base Plan: continue nearshore permitting, test material up to Cut 50 for nearshore compatibility, and incorporate beneficial use if it becomes least cost or if a non-Federal entity pays for it. The sponsor has expressed interest in building new islands in Mill Cove for environmental and recreational purposes, with dredged material disposal as a secondary purpose. USACE recommends that JAXPORT coordinate with Federal and Local agencies to determine the permitting requirements. Additionally, the sponsor may pursue FDOT cost sharing to build the Bartram Bridge.

13.2 Value Engineering

The selected plan accomplishes the Planning Objectives at the lowest cost. As stated in section 5.3.2, other options will be pursued during the Value Engineering study in the PED phase to see if the selected

plan can achieve greater efficiencies. These include nearshore placement, beach placement, rock placement on erosional river shorelines, upland expansion, and island creation.